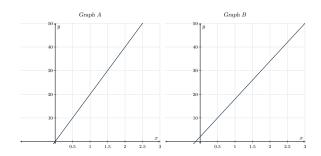
**Exercise 1** You and your friend decide to have a bike race. Your speed is 16 kilometers per hour, and your friend's is 20 kilometers per hour. Your friend is faster than you are, so they give you a head start of 2 kilometers.

Let f(x) be a linear function expressing the distance (in kilometers) you travel, and g(x) be a linear function expressing the distance (in kilometers) your friend travels.

(a) One of the following graphs represents f(x) and the other represents g(x).



The graph representing f(x) is

## Multiple Choice:

- (i) Graph A.
- (ii) Graph B. ✓
- (b) A linear equation for the distance you travel is f(x) = 16x + 2.
- (c) A linear equation for the distance your friend travels is g(x) = 20x.
- (d) If the race is 5 kilometers long, who will win?

## Multiple Choice:

- (i) You ✓
- (ii) Your friend
- (iii) It will be a tie
- (e) If the race is 10 kilometers long, who will win?

## Multiple Choice:

- (i) You
- (ii) Your friend
- (iii) It will be a tie ✓

(f) If the race is 20 kilometers long, who will win?

## Multiple Choice:

- (i) You
- (ii) Your friend ✓
- (iii) It will be a tie